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ABSTRACT

This guide, which is intended for classroom teachers, supervisors, and administrators throughout Alabama, contains the minimum required content (core program) for public school instruction in health care science and technology education in grades 7-12. Presented first are the following: content and conceptual framework of Alabama's health care science and technology education course of study; operational definitions; nature/rationale of clinical experiences in health care science and technology education; and directions for interpreting the minimum required content. Most of the guide consists of parallel lists of topics and content standards for the health care technology course of study (foundations of health care, foundations and advanced health care internship, health care specialization, and health care specialization plus preceptorship) and the health care science course of study (mentorship, internship, and preceptorship). Appended are Alabama's diploma requirements and guidelines for local time requirements and homework. (MN)

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Alabama Course of Study
Healthcare Science & Technology Education

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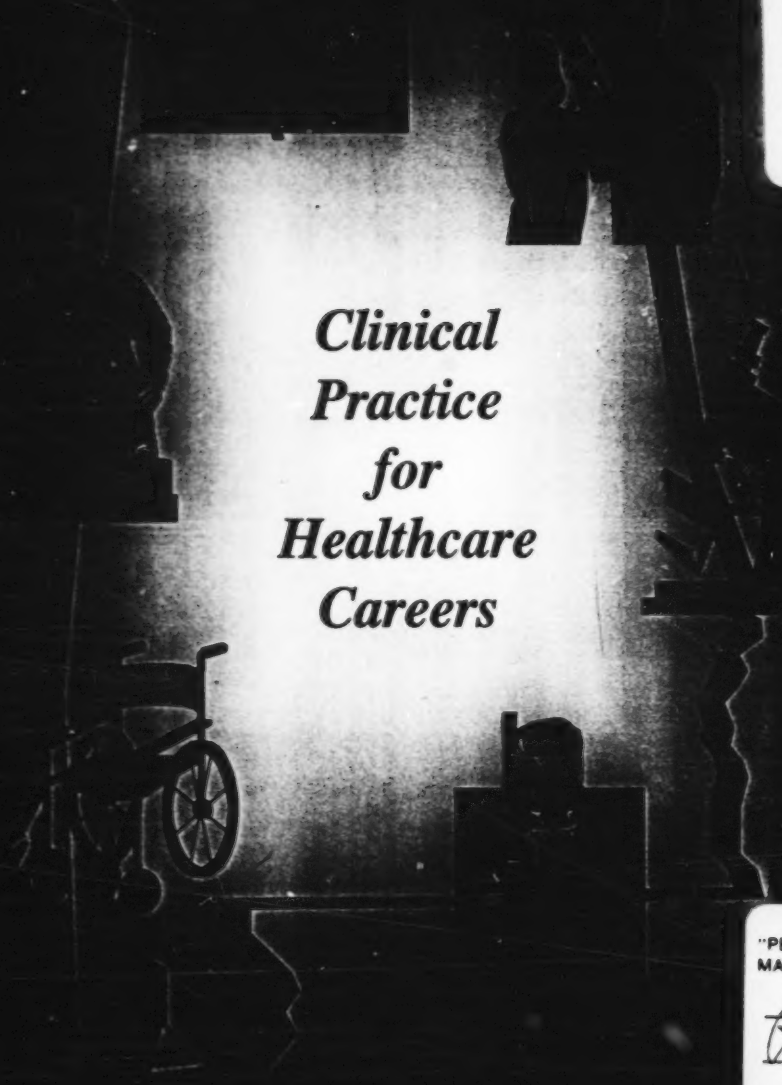

Clinical Practice for Healthcare Careers

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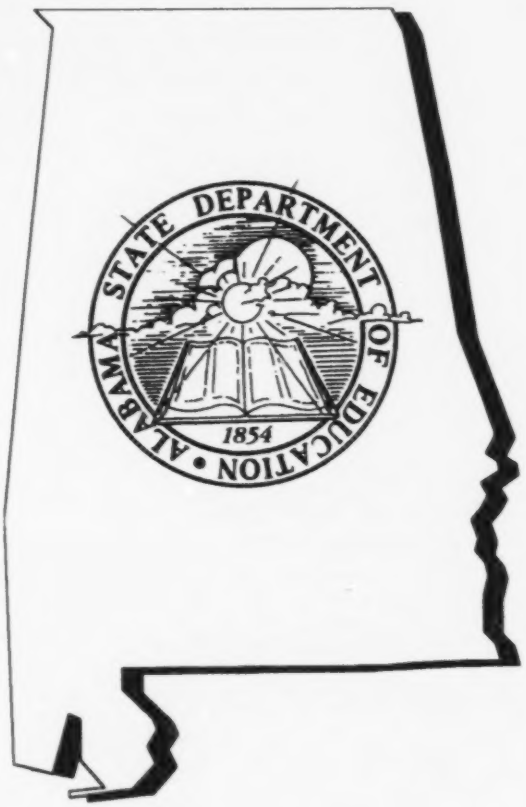

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Bulletin 1996, No. 18

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July 1996

Dear Educator:

Vocational/Technical Education Curriculum is a vital part of the total education program. The course of study includes a complete range of technical skills and interpersonal skills. It incorporates higher-order thinking skills with academic skills to provide for the transition from secondary programs to postsecondary programs. The content of each vocational program emphasizes strong partnership with business and industry to provide for upward job mobility.

The course of study addresses the explosion of information and technological development that has necessitated change in curriculum development and instructional methodology. The **Alabama Course of Study** parallels national efforts to update vocational education to meet the emerging needs of the information age. It reflects a conscious decision to implement a vigorous, integrated, hands-on, minds-on approach for vocational instruction. This course of study serves as a cornerstone in the collaborative efforts among educators, parents, students, and business and technology leaders to provide opportunities for all Alabama students to become occupationally competent citizens.

Designed for use by classroom teachers, supervisors, and administrators to guide the development of local programs, this document contains the minimum required content (core program) for public school instruction in Grades 7-12 in vocational education. The State Board of Education, the Vocational Courses of Study Committee, and I sincerely believe that this Course of Study and instructional programs developed from it will equip future adult citizens with interpersonal and technical skills for life-long occupations.

Sincerely,

Ed Richardson
State Superintendent of Education

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Alabama Course Of Study:

Healthcare Science And Technology Education

TABLE OF CONTENTS

SUPERINTENDENT'S STATEMENT i

PREFACE v

ACKNOWLEDGMENTS vii

INTRODUCTION 1

CONCEPTUAL FRAMEWORK 3

OPERATIONAL DEFINITIONS 6

CLINICAL EXPERIENCES 7

DIRECTIONS FOR INTERPRETING THE MINIMUM REQUIRED CONTENT 8

HEALTHCARE TECHNOLOGY

- Foundations of Healthcare 9
- Foundations and Advanced Healthcare 16
- Foundations and Advanced Healthcare with Internship 18
- Healthcare Specialization 20
- Healthcare Specialization and Preceptorship 24

HEALTHCARE SCIENCE

- Mentorship and Internship 25
- Mentorship, Internship, and Preceptorship 27

APPENDICES

- A. *Diploma Requirements* 29
- B. *Guidelines for Local Time Requirements and Homework* 31

BIBLIOGRAPHY 33

Preface

The Alabama Course of Study: Healthcare Science and Technology Education (Bulletin 1996, No. 18) provides the framework for the Healthcare Science and Technology program in Alabama's public schools. Content standards in this document are minimum and required (Ala. Code 16-35-4). School systems may include additional content standards to reflect local philosophies and may add implementation guidelines, resources, and/or activities that, by design, are not contained in this document.

The 1995-96 Healthcare Science and Technology Education Course of Study Committee used curriculum guidelines from the states of Florida and North Carolina. A variety of professional journals and other publications addressing current trends in healthcare and medical education were also utilized. This Alabama Course of Study was developed to lead Healthcare Science and Technology students into the 21st Century.

Acknowledgments

This document was developed by the Healthcare Science and Technology Education sub-committee of the 1995-96 Vocational Education State Courses of Study Committee that is composed of vocational classroom teachers; local school system vocational directors, supervisors, and other administrators; college educators appointed by the State Board of Education; and business and professional persons appointed by the Governor (Ala. Code §16-35-1). The Healthcare Science and Technology Education sub-committee began work in June 1995 and submitted its work to the State Board of Education for consideration in early 1996.

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The Committee extends appreciation to the **Morgan County Board of Education**, the **Jefferson County Board of Education**, and the **Lurleen B. Wallace Community College** for the use of their facilities in June for hosting the Vocational Education State Courses of Study Committee's Public Hearings.

Appreciation is also extended to **Sherry Key**, Vocational Director, Troy-Pike AVC, who served as content reviewer of the document.

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Helen J. Taylor, support staff in the Healthcare Science and Technology Section, and **Patricia James** and **Julia Sanders**, support staff in the Business Education Section, assisted with the preparation of the document.

Introduction

Healthcare Science and Technology (HST) provides career preparation for students in Grades 11 and 12. The purposes of the Healthcare Science and Technology program are to:

- introduce students to the healthcare system.
- assist students to make realistic career decisions.
- prepare students for entry-level employment in supportive healthcare jobs and acceptance in a postsecondary healthcare education program.

The program is competency-based, utilizing learner-centered instruction that provides opportunities for students to learn skills for a cluster of jobs and specific entry-level positions in healthcare.

Every local school system has the responsibility to ensure that Alabama students will be competitive on a national level. The Secretary's Commission on Achieving Necessary Skills (SCANS) defines the competencies that students need to be successful in the workplace. These competencies are integrated into the HST curriculum by placing the students in the healthcare setting to meet learning objectives rather than by practicing skills in the classroom/laboratory in isolation from the real workplace. Students become motivated by participating as members of the healthcare team and become more active in planning their own learning.

Educational goals developed by the National Healthcare Skill Standard Project (NHCSSP) are addressed in the ***Alabama Course of Study: Healthcare Science and Technology Education***. NHCSSP, a joint project of the U.S. Departments of Education and Labor, defined generic job skills needed in the modern workplace. The healthcare standards provide a valuable framework for the preparation of students for occupation-specific training programs, certification, and licensure. The Healthcare Science and Technology content standards are grouped according to the NHCSSP core and cluster standards. An asterisk (*) identifies the NHCSSP learning goals for HST students.

Program Description

Healthcare Science and Technology Education prepares competent workers capable of providing quality healthcare services for individuals and communities. Student participation in simulations of healthcare through classroom and laboratory activities provides opportunities for exploration and identification of individual interests and abilities. The cooperation of private and public community healthcare facilities and agencies with the HST program enables students to participate in an authentic work environment. Rotations through healthcare specialty areas provide students with clinical experiences in areas of interest. Students

participate in the clinical experience segment of the program when they are considered competent in basic skills by the HST instructor.

Professional organizations and legally constituted state authorities regulate healthcare practices as a means of safeguarding the public. Each HST program, therefore, functions within the guidelines of the governing regulatory agencies in Alabama; and local healthcare agencies have an advisory role in planning and implementing the HST program.

Conceptual Framework

Healthcare Science and Technology

The diagram that follows is the conceptual framework for HST and gives an overview of the courses offered. Integration of academic instruction, career preparation, employability skills, and clinical experience provides the framework for learning.

A student follows one of these paths to complete the Healthcare Science and Technology program.

Path I: Healthcare Technology (HT)

Path II: Healthcare Science (HS)

Four HST units with a minimum of two units earned in Grade 12 are suggested. The four required units may be earned in HST courses or in combination with specified laboratory sciences.

Three credit courses are not depicted on the schematic drawing of the program design. Content standards are identified in the text of this document if the local system offers a three-credit course.

Prerequisites. Healthcare Science students must have completed three units of laboratory sciences that include biology, chemistry, and physics or advanced biology. Students must be able to function independently in the clinical component of the program including transporting themselves to the community-based clinical site.

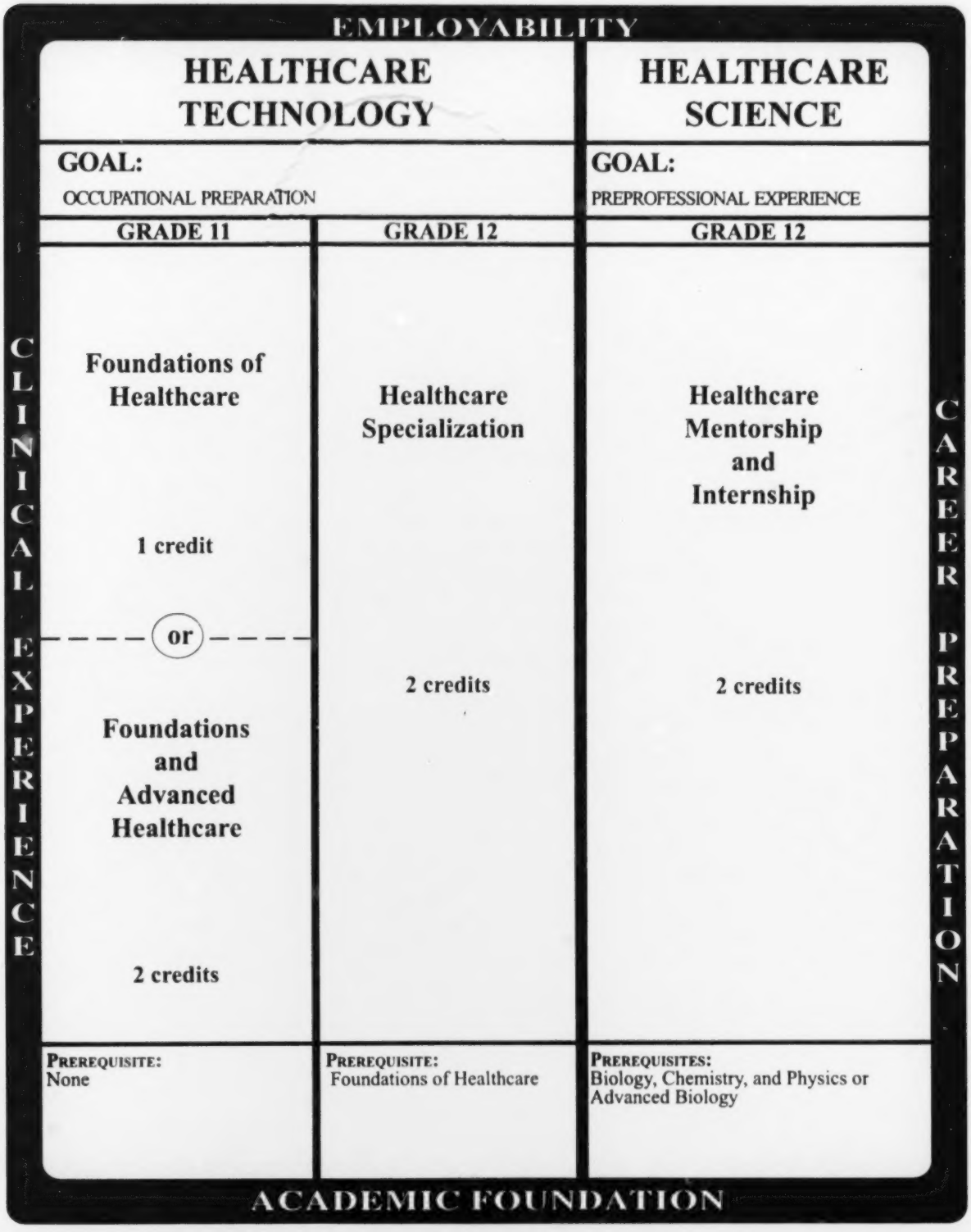
Healthcare Technology is a two-year program that provides career preparation for students in Grades 11 and 12. In Grade 11, students develop a basic understanding of the healthcare system and acquire skills common to many health careers. Community-based clinical experiences and internships allow students to practice healthcare skills under the supervision of experienced healthcare workers. These experiences provide a basis for informed career decision-making. Students in Grade 12 continue skill development and clinical experience in the career-specific healthcare specialization course. For schools with a need for HST in Grade 10, appropriate courses will be approved.

Healthcare Science is a one-year accelerated program for qualified Grade 12 students who have a professional-level healthcare career objective. The program gives advanced-level students clinical experience before entering a college program in healthcare. Independent study prepares students for the community-based clinical experiences. The clinical

assignments can begin when the instructor deems an individual student is competent to be released to a clinical site. The learning objectives of HS are to be learned primarily in the clinical setting and supervised by healthcare professionals.

Health Occupations Students of America (HOSA), the national student organization for HST students, is an integral part of the program. Participation in the local, state, and national HOSA organization provides opportunities for students to develop leadership, civic, and employability skills. Participation in this pre-professional organization emphasizes the importance of membership in professional organizations as students enter the workforce.

HEALTHCARE SCIENCE AND TECHNOLOGY



Operational Definitions

CLINICAL EXPERIENCE: learning occurring in a specifically assigned healthcare agency within the local community. Healthcare professionals and/or employees of the agency act as mentors, supervisors, or preceptors for the students assigned to the healthcare site. The HST instructor coordinates student learning by working with healthcare personnel to plan specific learning objectives that will be related to the student's occupational objective. Tasks related to the occupational objective are performed within the assigned healthcare agency.

INTERNSHIP: clinical experience in which an HST student is assigned to a community healthcare agency to gain clinical experience and practice healthcare skills under the supervision of an employee of a healthcare agency.

MENTORSHIP: clinical experience in which an HST student is assigned to a specific licensed healthcare employee (mentor) to gain clinical experience. The mentor assists the student to plan learning objectives and supervises the student during the practice of healthcare skills related to a specific occupational objective.

OCCUPATIONAL OBJECTIVE: the specific job title that each HST student selects as the major area of specialized study. The student must declare an occupational objective upon entering Grade 12.

PRECEPTORSHIP: clinical experience in which an HST student is assigned to a healthcare agency for practice of previously learned skills. The student functions as a member of the healthcare team by performing entry-level job skills under the supervision of a specifically assigned licensed healthcare preceptor who is employed by a healthcare agency.

SHADOWING: one-on-one observation of a single health care worker in the job setting. A student may shadow different workers by rotating through several areas of healthcare.

Clinical Experiences

Healthcare Science And Technology

The ***Alabama Course of Study: Healthcare Science and Technology Education*** does not include a traditional cooperative work program. HST provides planned, coordinated clinical experiences that include work-based learning and employment in healthcare.

Healthcare Technology Foundations of Healthcare uses shadowing experiences to identify career opportunities. The shadowing allows students to observe the importance of positive attitude, correct grooming habits, dependability, and honesty in healthcare careers.

The Advanced Healthcare and Internship components of HT include the practice of patient care in a simulated laboratory setting and in clinical sites. Students are assigned to the clinical area when the instructor determines a safe level of competency has been achieved.

Healthcare Specialization, the second year of HT, is career-specific. Students participate in internships or preceptorships for a particular healthcare job, paid or unpaid.

Healthcare Science (HS) students gain preprofessional experience during clinical assignments. Mentorships, internships, preceptorships, or employment provide that experience.

Clinical assignments are based on contractual agreements and training plans developed jointly by the school system and the training agency. Personnel within the clinical setting assist with:

implementing training plans,
providing direct supervision of students,
planning strategies to include students as members of the healthcare team, and
assisting with the evaluation of students.

Students may be assigned to hospitals, clinics, long-term care agencies, home health agencies, blood drives, health fairs, and health screenings. Assignments to multi-handicapped classes, rehabilitation agencies, and adult day-care centers are additional alternatives for clinical experiences.

Directions for Interpreting the Minimum Required Content

1. **CONTENT STANDARDS** are statements of what students should know and be able to do. In this document, the minimum required content as prescribed by the Alabama State Board of Education (Ala. Code 16-35-3) is listed as content standards. The order in which content standards are listed is not intended to convey a sequential order for instruction. A content standard may describe a concept or skill that will be addressed throughout the school year.

2. Content standards describe what students should know and be able to do at the conclusion of the course. Each content standard contains a **STEM** that completes the phrase, "Students will ...." The stem describes what students are expected to do by the end of the course.

> **Students will:**
>
> *Perform an EKG*
>
> (Foundation of Healthcare - Content Standard 36)

3. Additional minimum required content may be listed under a content standard and denoted by a hyphen. The **ADDITIONAL CONTENT** provides specificity for the content standard.

> **Students will:**
>
> *Monitor vital signs:*
>
> *-Blood Temperature*
> *-Pulse*
> *-Respiration*
> *-Blood Pressure*
>
> (Foundations of Healthcare - Content Standard 29)

4. **EXAMPLES** help clarify the content standard. They are illustrative but not exhaustive. Teachers may add to or substitute examples when planning instruction.

> **Students will:**
>
> *Assist with health screening.*
>
> *Examples: vision screening, scohosis check*
>
> (Foundations of Healthcare - Content Standard 28)

HEALTHCARE TECHNOLOGY

Foundations of Healthcare
(One Credit)

This introductory course enables students to learn skills common to many health careers. Community-based clinical experiences provide students with opportunities to shadow healthcare workers on the job. Job skill development in the classroom, coordinated with community based activities, enables students to make a tentative career choice.

TOPICS	CONTENT STANDARDS
Opportunities in Healthcare Related Careers	* HST students will understand how their roles fit in with their unit, their setting, and the overall healthcare environment. They will identify how key systems relate to the services they perform and affect quality of care *Students will:* 1. Investigate the healthcare delivery system. Examples: individual reports, interviews, group projects 2. Identify health careers in the local community. 3. Demonstrate leadership skills and community service through Health Occupations Students of America (HOSA). Example: complete HOSA Recognition Program Level-I Helper
Related Knowledge	*HST students will know the academic subject matter required for proficiency within their area. They will use this knowledge as needed. *Students will:* 4. Describe the general plan of the human body. -Cell structure, function, and organization -Relationship of cells, tissues, organs, and systems -Body planes and cavities -Directional terms

TOPICS	CONTENT STANDARDS
Related Knowledge (continued)	5. Use medical terms in communications. -Roots -Prefixes -Suffixes -Abbreviations
Pharmacology	6. Explain the role of medications in healthcare. 7. Describe state and federal guidelines governing use of medications.
Safety	*HST students will be aware of the existing and potential hazards to clients, co-workers, and self. They will prevent injury through safe work practices and follow health and safety policies and procedures. *Students will:* 8. Maintain a safe environment. 9. Describe appropriate responses to selected emergencies. Examples: fire, natural disaster 10. Use correct body mechanics in job performance. Examples: lifting and moving patients and equipment 11. Practice aseptic techniques used by healthcare workers. -Handwashing -Gloving -Universal precautions 12. Apply first aid principles. 13. Complete requirements for CPR certification.

TOPICS	CONTENT STANDARDS
Patient Movement	*HST students will understand the principles of proper body mechanics for positioning, transferring, and transporting clients. They will perform these activities efficiently and without injury to clients or self. *Students will:* 14. Transport patients. -Wheelchair -Stretcher 15. Move patients. -To head of bed -Dangle
Communication	*HST students will know various communication methods to give and obtain information. They will communicate effectively, both orally and in writing. *Students will:* 16. Apply the principles of communication. -Sender, channel, receiver, feedback -Verbal, nonverbal 17. Use electronic methods of communication.
Employability Skills	* HST students will understand how employability skills enhance their employment opportunities and job satisfaction. They will demonstrate key employability skills and will maintain and upgrade skills as needed. *Students will:* 18. Demonstrate steps in securing healthcare jobs.

TOPICS	CONTENT STANDARDS
Employability Skills (continued)	19. Exhibit essential personal skills for healthcare employment. -Responsibility -Dependability -Initiative -Adaptability 20. Maintain professional conduct and appearance. 21. Utilize current computer technology. -Classroom activities -Clinical applications
Legal Responsibilities	* HST students will understand their legal responsibilities, limitations, and the implications of their actions within the healthcare delivery setting. They will perform their duties in accordance with laws, regulations, policies, and legislated rights of clients. *Students will:* 22. Recognize legal implications in healthcare. -Standards of care -Malpractice and liability issues -Confidentiality -Documentation of care 23. Perform job skills in accordance with applicable laws, regulations, policies, and contracts.
Ethics	*HST students will understand accepted ethical practices with respect to cultural, social, and ethnic differences, particularly within the healthcare environment. They will perform their duties within established ethical guidelines, supporting sensitive and quality health delivery.

TOPICS	CONTENT STANDARDS
Ethics (continued)	24. Apply ethical guidelines in the workplace. -Loyalty to co-workers and organization -Patient rights 25. Apply personal code of ethics. -Honesty -Trustworthiness -Integrity
Health Maintenance Practices	*HST students will understand the fundamentals of wellness and the treatment of disease processes. They will encourage the practice of preventive health behaviors among their clients. *Students will:* 26. Explain methods of preventing the spread of disease. 27. Perform techniques for oral hygiene. -Care of teeth -Periodontal care 28. Assist with health screening. Examples: vision screening, scoliosis check
Medical Assessment Skills	* HST students will understand the process for monitoring client health status. They will assess health status according to respective professional standards and report results to the treatment team. *Students will:* 29. Monitor vital signs. -Body temperature -Pulse -Respiration -Blood pressure

TOPICS	CONTENT STANDARDS
Patient Care Related to Body Systems	*Students will:* 30. Weigh patient. 31. Measure patient's height. 32. Ambulate patient. -Assist to stand -Assist to walk 33. Maintain adequate nutrition. 34. Perform range-of-motion exercises. 35. Assist with respiratory function. -Deep breathing -Coughing 36. Perform an EKG. 37. Type blood samples. 38. Measure specific gravity of urine. 39. Test urine for sugar and acetone. 40. Maintain skin integrity. Examples: prevention of sports-related problems, bed bath, back rub, bed making

TOPICS	CONTENT STANDARDS
Community-Based Activities	* HST students will apply skills and knowledge in the client-healthcare worker relationship. *Students will:* 41. Develop appropriate behaviors and attitudes required for healthcare jobs. Examples: shadowing healthcare workers, small group visits to healthcare agencies 42. Plan community service activities. Example: complete Level II HOSA Recognition Program

FOUNDATIONS AND ADVANCED HEALTHCARE
(Two Credits)

In this two-unit course, students learn more complex skills after completing the foundation activities of the first course. Students develop additional healthcare skills related to illness while investigating the diseases and treatment of illnesses within each body system. Community-based clinical experiences are an integral part of the course.

TOPICS	CONTENT STANDARDS
	Foundations of Healthcare Course Content Standards 1-42
Implement Procedures as Related to Disease Processes	* HST students will understand the procedures within their scope of practice and how these procedures relate to the goals and objectives of the treatment plan. They will execute the procedures accurately and in a timely fashion, supporting the treatment team. *Students will:* 43. Classify communicable diseases. -Viral -Bacterial -Protozoan and amoebic 44. Describe the inflammatory process. 45. Explain diagnostic procedures for identifying diseases of each body system. 46. Practice isolation techniques. 47. Ambulate patient with assistance devices. -Walker -Gait belt

TOPICS	CONTENT STANDARDS
Implement Procedures as Related to Disease Processes (continued)	48. Provide care for soft tissue injury. -Cold packs -Compression -Elevation 49. Give specialized skin care. Examples: turning schedules, care for burns, observe skin integrity 50. Position dependent patients. 51. Recognize conditions that may require renal dialysis as part of the treatment plan. 52. Describe nuclear medicine procedures for treatment of gastrointestinal diseases. 53. Describe the signs and symptoms of sexually transmitted diseases (STDs). 54. Assist with oxygen therapy. 55. Assess blood glucose level. 56. Measure hemoglobin. 57. Identify cardiac arrhythmias. -Tachycardia -Bradycardia
Clinical Assignments	HST students will plan how and when to perform procedures, prepare necessary supplies and equipment, and demonstrate performances of procedures correctly. *Students will:* 58. Perform health care skills in assigned clinical site. Examples: clinical rotations, job specific mentorships, internships

FOUNDATIONS AND ADVANCED HEALTHCARE WITH INTERNSHIP

(Three Credits)

The basic and advanced skills are expanded in this three-unit course. Students will have individualized learning plans focusing on personal interests and aptitude. The course is designed to prepare students to select a specialized area of study for the Grade 12 Healthcare Technology course.

TOPICS	CONTENT STANDARDS
	Foundations of Healthcare Content Standards 1-42 Advanced Healthcare Content Standards 43-58
Client Status Evaluation	* HST students will know the client's needs, strengths, and problems. They will assist in the evaluation of client status in order to reach treatment goals. *Students will:* 59. Collect patient data. -Health history -Signs and symptoms 60. Assess level of consciousness. 61. Recognize normal cardiac cycle of EKG tracings. 62. Perform prenatal check. -Weight -Vital signs -Blood glucose -Urine protein
Treatment Planning	* HST students will understand the general purpose and components of the treatment plan. They will assist in planning and procedures according to facility. *Students will:* 63. Plan diet using food exchanges.

TOPICS	CONTENT STANDARDS
Treatment Planning (continued)	64. Develop prenatal teaching plan.
Intrateam Communications	* HST students will understand how to communicate within a team. They will convey critical client information to appropriate team members in a timely manner. *Students will:* 65. Practice team membership skills. -Cooperation -Effective communications 66. Recognize implications of healthcare hierarchy in interacting with others. -Line and staff interactions -Organizational behavior in the healthcare system 67. Utilize appropriate techniques for managing conflicts within the workplace. 68. Respect cultural and religious differences of team.
Community-Based Activities	HST students will perform patient services, evaluate the services performed, and report the results accurately. *Students will:* 69. Plan and implement community service projects or programs. 70. Perform healthcare skills in expanded individualized clinical experiences. -Internship

Healthcare Specialization
(Two Units)

The Healthcare Technology Specialization course continues skill development that prepares students for employment in a specific healthcare job and for entry into a postsecondary program. Students pursue skill mastery in the classroom/laboratory and participate in intensive job-specific training in the clinical area, paid or unpaid. Students may change an occupational objective if the chosen job title proves unsuitable; however, competency in the new area of specialization must be attained before being assigned to the clinical area.

TOPICS	CONTENT STANDARDS
Medical Math	HST students will analyze information and apply previously learned principles and skills to job duties. *Students will:* 1. Use metric, household, and apothecary systems of measurement. 2. Perform basic mathematical calculations. -Whole numbers -Fractions -Decimals -Percentages 3. Use mathematical formulas. -Temperature conversions -Pediatric dosages 4. Calculate dosages and solutions. -Ratio and proportion -Desired/have formula 5. Use statistical procedures for reporting healthcare data. Examples: collecting data, interpreting data

TOPICS	CONTENT STANDARDS
Advanced Pharmacology	6. Classify medications. 7. Analyze medications using medical references. -Classification -Indications -Contraindications -Side effects -Recommended dosages
Career Preparation	8. Demonstrate steps in securing healthcare jobs. -Portfolio -Interview -Follow-up letter 9. Prepare for career mobility. -Continuing education -Job trends -Resignation procedures 10. Prepare for admission to postsecondary education.
Emergency Skills	11. Recertify CPR skills.
Life Span Needs	12. Differentiate developmental stages of life. 13. Provide care adapted to life span needs.
Career Specialization	14. Develop entry-level job competencies related to a selected area of specialized study. -Cardiac Monitor Technician -Central Supply Aide -Dental Assistant -Dental Laboratory Aide -Dialysis Aide -Dietary Aide -Emergency Medical Technician -Health Unit Manager (Ward Clerk)

TOPICS	CONTENT STANDARDS
Career Specialization (continued)	-Home Health Aide -Housekeeping Aide -Long-term Care Assistant -Medical Assistant -Medical Laboratory Aide -Medical Records Assistant -Mental Health Aide -Nursing Assistant -Occupational Therapy Aide -Ophthalmic Aide -Patient Transporter -Pharmacy Aide -Physical Therapy Aide -Radiologic Technology Aide -Rehabilitation Aide -Respiratory Therapy Aide -Surgical (OR) Aide -Veterinary Aide -Other emerging healthcare careers
Clinical Assignments and/or Employment	15. Perform health care skills in assigned clinical specialization site, paid or unpaid. 16. Complete steps for securing a healthcare job based upon available employment opportunities.
Client Interaction	* HST students will understand how to explain planned procedures and goals to clients. They will use various explanation strategies and answer clients' questions. *Students will:* 17. Conduct health teaching plan. 18. Use therapeutic communication techniques. Examples: restating, clarifying, active listening, complete Level III HOSA Recognition Program

TOPICS	CONTENT STANDARDS
Data Collection	* HST students will know the facility protocol and guidelines for collecting data. They will report results and assist the treatment team in identifying client healthcare needs, strengths, and problems. *Students will:* 19. Interpret physician's orders. 20. Record pertinent healthcare information.
Information Operations	* HST students will understand the operations used to enter, retrieve, and maintain information. They will use health information equipment and materials safely and efficiently in daily operations. *Students will:* 21. Process data. 22. Verify patient information. 23. Prepare various reports.

Healthcare Specialization and Preceptorship
(Three Units)

Individualized instruction is directed toward developing values regarding the importance of research in healthcare. Community-based preceptorship is the primary learning strategy. The student functions as a member of the healthcare team, paid or unpaid. A licensed or certified healthcare professional employed by the clinical facility supervises the student.

TOPICS	CONTENT STANDARDS
	Occupational Specialization Course Content Standards 1-23
Healthcare Team Skills	HST students will function as independent learners under the supervision of a licensed healthcare worker.
	Students will:
	24. Provide patient feedback to treatment team.
	25. Apply principles of quality assurance.
	26. Recognize abnormal patient response to procedures.
	27. Report information necessary to adjust or modify procedures.
Individualized Study	28. Research issues in healthcare.
	29. Participate in healthcare seminars, workshops, and training programs.

HEALTHCARE SCIENCE

Mentorship and Internship
(Two Units)

Healthcare Science (HS) is an accelerated program offered to Grade 12 students enrolled in college-preparatory courses. Considerations for enrollment in the program include superior academic performance, regular school attendance, and the ability to learn independently. Prerequisites are biology, chemistry, and physics or an advanced biology. Students enrolled in HS will have a health career objective that requires a baccalaureate or graduate degree.

The purpose of HS is to assist students in confirming their medical career goals. Independent study is the primary classroom learning strategy with clinical assignments comprising at least 60 percent of the HS program. Course content includes career-related skills, healthcare systems, communication, emergency skills, and pharmacology. Clinical mentorships and internships focus on a specific healthcare profession.

TOPIC	CONTENT STANDARDS
Career-Related Healthcare Skills	* HST students will understand the procedures within the scope of practice and how these procedures relate to the goals and objectives of the treatment plan. They will execute the procedures accurately and in a timely fashion, supporting the treatment team. *Students will:* 1. Perform entry-level healthcare skills from Foundations and Advanced Healthcare Technology related to specific healthcare career choice (Content Standards 1-70).
Employability Skills	* HST students will understand how employability skills enhance their employment opportunities and job satisfaction. They will demonstrate key employability skills and will maintain and upgrade skills as needed. *Students will:* 2. Exhibit skills for healthcare employment. -Professional conduct and appearance -Interpersonal skills -Team membership skills

TOPICS	CONTENT STANDARDS
Employability Skills (continued)	3. Practice legal and ethical behavior. -Standards of healthcare practice -Confidentiality -Patient rights -Personal ethics 4. Describe healthcare delivery and financing.
Communication within Healthcare Systems	* HST students will know various communication methods to give and obtain information. They will communicate effectively, both orally and in writing. *Students will:* 5. Use medical abbreviations and terminology. 6. Communicate within the healthcare system physician's orders. -Patient records 7. Use electronic methods of communication.
Emergency Skills	8. Complete CPR certification.
Pharmacology	9. Analyze medications using medical references. -Classification -Indications -Contraindications -Side effects -Recommended dosages
Clinical Assignments and/or Employment	10. Perform healthcare skills in clinical agency, paid or unpaid. -Mentorship -Internship

HEALTHCARE SCIENCE

Mentorship, Internship, and Preceptorship
(Three Units)

Independent study is directed toward developing values regarding the importance of higher education and research in healthcare. Clinical experiences are expanded to include a preceptorship in which the student functions with limited supervision from a healthcare professional preceptor. Synthesis, analysis, and evaluation are the learning levels emphasized. Students complete research projects and perform high-level reasoning skills.

TOPICS	CONTENT STANDARDS
	Mentorship and Internship Course Contents Standards 1-10
Intrateam Communications	* HST students will understand how to communicate within a team. They will convey critical client information to appropriate team members in a timely manner. *Students will:* 11. Practice team membership skills. -Cooperation -Effective communications 12. Recognize implications of healthcare hierarchy in interacting with others. -Line and staff interactions -Organizational behavior in healthcare systems 13. Utilize appropriate techniques for managing conflicts within the workplace. 14. Respect cultural and religious differences of team members.
Client Status Evaluation	15. Collect patient data. -Health history -Signs and symptoms 16. Assess level of consciousness.

TOPIC	CONTENT STANDARDS
Client Interaction	* Healthcare students will understand how to explain planned procedures and goals to clients. They will use various explanation strategies and answer clients' questions.
	Students will:
Preceptorship	17. Assess client's understanding of treatment plan.
	18. Use therapeutic communication techniques.
	Examples: restating, clarifying, active listening
	19. Perform duties of a healthcare team member, paid or unpaid.
	20. Conduct research projects.

APPENDIX A

DIPLOMA REQUIREMENTS

Effective for students who begin the ninth grade in the 1996-97 school year, in order to earn an Alabama high school diploma, students must successfully complete the High School Basic Skills Exit Exam and earn the requirements for the Alabama High School Diploma or the Alabama High School Diploma with Advanced Academic Endorsement. A local board of education may establish requirements for receipt of additional endorsements, but any endorsement must include those requirements for the Alabama High school diploma.

Alabama High School Diploma

	Credits
English Language Arts	4
Four credits to include the equivalent of:	
English 9	1
English 10	1
English 11	1
English 12	1
Mathematics	4
Four credits to include the equivalent of:	
Algebra I	1
Geometry	1
Science	4
Four credits to include the equivalent of:	
Biology	1
A Physical Science	1
Social Studies	4
Four credits to include the equivalent of:	
Grade 9	1
World History	1
U. S. History	1
Government	1/2
Economics	1/2
Physical Education	1
Health Education	1/2
Fine Arts	1/2
Computer Applications*	1/2
Electives	5 1/2
Local boards must offer foreign languages, fine arts, physical education, wellness education, vocational and technical preparation, and driver education as electives.	
TOTAL	24

*May be waived if computer literacy, keyboarding skills, and introductory applications are verified by qualified staff at the high school. The designated one-half credit will then be added to the electives, making a total of six electives.

Alabama High School Diploma with Advanced Academic Endorsement

Credit earned through applied academic courses or embedded credit situations will not satisfy the core curriculum requirements for a diploma with an advanced endorsement.

	Credits
English Language Arts	4
Must include advanced levels of:	
English 9	1
English 10	1
English 11	1
English 12	1
Mathematics	4
Must include advanced levels of:	
Algebra II with Trigonometry	1
Science	4
Must include advanced levels of:	
Biology	1
A Physical Science	1
Additional Life and/or Physical Science	2
Social Studies	4
Must include advanced levels of:	
Grade 9	1
World History	1
U. S. History	1
Government	1/2
Economics	1/2
Physical Education	1
Health Education	1/2
Fine Arts	1/2
Computer Applications*	1/2
Foreign Language	2
Electives	3 1/2
Local boards must offer foreign languages, fine arts, physical education, wellness education, vocational and technical preparation, and driver education as electives.	
TOTAL	24

*May be waived if computer literacy, keyboarding skills, and introductory applications are verified by qualified staff at the high school. The designated one-half credit will then be added to the electives, making a total of four electives.

APPENDIX B

GUIDELINES FOR LOCAL TIME REQUIREMENTS AND HOMEWORK

In accordance with # 1.1.5 (Action Item #F-1) adopted by the Alabama State Board of Education on February 23, 1984, which directs the State Courses of Study Committee to include time-on-task requirements in the State Courses of Study, the following recommendations are made:

- Local school systems should develop time allocations that reflect a balanced school day. In addition, they should account for the law related to time requirements (§16-1-1, Ala. Code, 1975); that is, the total instructional time of each school day in all schools and at all grade levels shall not be less than 6 hours or 360 minutes, exclusive of lunch periods, recess, or time used for changing classes.
- The recommended list below resulted from considerations of a balanced educational program. Any deviations established at the local level should be accompanied by rationales that ensure balance and are compatible with the developmental characteristics of students.

NOTE: Time requirements provide a general plan and are to be implemented with a flexibility that encourages interdisciplinary approaches to teaching.

SUBJECT AREA	GRADES 1-3	GRADES 4-6
Language Arts	150 minutes daily	120 minutes daily
Mathematics	60 minutes daily	60 minutes daily
Science	30 minutes daily	45 minutes daily
Social Studies	30 minutes daily	45 minutes daily
Physical Education	30 minutes daily*	30 minutes daily*
Health	60 minutes weekly	60 minutes weekly
Art	60 minutes weekly	60 minutes weekly
Music	60 minutes weekly	60 minutes weekly
Computer Education	60 minutes weekly	60 minutes weekly

*Established by the State Department of Education in accordance with §16-40-1 (Ala. Code, 1975)

GRADES 7-12

A minimum of 140 clock hours of instruction is required for one unit of credit. A time allotment of either 50 minutes per day or 250 minutes per week will satisfy this requirement and still allow for flexible scheduling. This requirement applies to those schools that are not accredited as well.

In those schools where Grades 7 and 8 are housed with other elementary grades, the school may choose the time requirements listed for Grades 4-6 or those listed for Grades 7-12.

REMEDIAL AND/OR ENRICHMENT ACTIVITIES

Remedial and/or enrichment activities should be a part of the time schedule for the specific subject area.

KINDERGARTEN

In accordance with *Ala. Admin. Code* r. 290-050-010.01 (4) Minimum Standards for Organizing Kindergarten Programs in Alabama Schools, the daily time schedule of the kindergartens shall be the same as the schedule of the elementary schools in the systems of which they are a part. This standard references the fact that kindergartens in Alabama operate as full-day programs.

In accordance with *Ala. Admin. Code* r. 290-050-010.02, the official guide for program planning in kindergarten is *Alabama Kindergartens*, Bulletin 1987, No. 28. Criteria to be used in scheduling are listed on pages 45-46 of this guide. These include a balance of individual exploration, small-group interest activities, interaction with peers and teachers, handling of concrete materials and many other real world experiences. The emphasis is on large blocks of time that allow children the opportunity to explore all areas of the curriculum in an unhurried manner.

HOMEWORK

Homework is a vital component of every student's instructional program. Students, teachers, and parents should have a clear understanding of the objectives to be accomplished through homework and of the role it plays in meeting requirements of a course. Homework should be meaningful and used to reinforce classroom instruction. It should not place students and parents in a position of having to study skills that have not been introduced and practiced through classroom instruction. Furthermore, students and parents should not be burdened by excessive amounts of homework.

Each local board of education shall establish a policy on homework consistent with the State Board of Education resolution adopted February 23, 1984. (Action Item #F-2)

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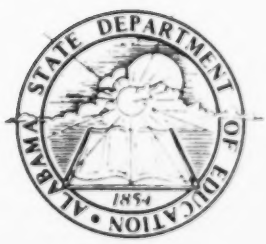
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